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<p>(21) International Application Number: PCT/US98/09489</p> <p>(22) International Filing Date: 8 May 1998 (08.05.98)</p> <p>(30) Priority Data: 08/855,881 12 May 1997 (12.05.97) US 60/062,679 22 October 1997 (22.10.97) US</p> <p>(71) Applicant (<i>for all designated States except US</i>): AMATI COMMUNICATIONS CORPORATION [US/US]; 243 Samaritan Drive, San Jose, CA 95124 (US).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (<i>for US only</i>): CHOW, Jacky, S. [-/US]; 880 Babb's Creek Road, Gilroy, CA 95020 (US). BINGHAM, John, A., C. [US/US]; 2353 Webster Street, Palo Alto, CA 94301 (US).</p> <p>(74) Agent: DOUGLASS, Thomas, C.; Beyer & Weaver, LLP, P.O. Box 61059, Palo Alto, CA 94304 (US).</p>		<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SL, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 11 February 1999 (11.02.99)</p>	
<p>(54) Title: METHOD AND APPARATUS FOR SUPERFRAME BIT ALLOCATION IN A DISCRETE MULTITONE (DMT) SYSTEM</p> <pre>graph LR Controller[CONTROLLER] --> BitTable[SF BIT ALLOCATION TABLE] Controller --> EnergyTable[SF ENERGY ALLOCATION TABLE] BitTable --> FEC[FEC] FEC --> Buffer[BUFFER] Buffer --> DataEncoder[DATA SYMBOL ENCODER] DataEncoder --> IFFT[IFFT] EnergyTable --> IFFT IFFT --> DAC[DAC] DAC --> Output[500]</pre>			
<p>(57) Abstract</p> <p>A method and apparatus for supporting multiple bit allocations in a multicarrier modulation system are disclosed. Hence, symbols being transmitted or received can make use of different bit allocations. By supporting the multiple bit allocations, the multicarrier modulation system is able to support bit allocation on a superframe basis. Also disclosed are techniques for selection and alignment of superframe formats to improve system performance. In the case of data transmission systems involving different transmission schemes, different bit allocations can be used to reduce undesired crosstalk interference.</p>			

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 98/09489

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 H04L27/26 H04L5/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 5 495 483 A (PENDLETON MATTHEW A ET AL) 27 February 1996</p> <p>see column 2, line 48 - column 3, line 10 see column 3, line 35 - line 53 see column 7, line 13 - column 8, line 14 see column 10, line 6 - line 16 see column 10, line 54 - column 11, line 12 see column 13, line 45 - line 61 see column 24, line 55 - column 25, line 60 see column 26, line 53 - column 27, line 35 see column 30, line 43 - column 34, line 52 see figures 6,7</p>	<p>1-9, 12-16, 19-33, 47-50</p>
A	-/-	<p>11,18,</p>

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 98/09489

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
		34,35, 41, 44-46, 52-55
A	WO 97 03506 A (AMATI COMMUNICATIONS CORP ;BINGHAM JOHN A C (US); TONG (US)) 30 January 1997 see abstract	10,11, 17,18, 34-42, 46,51, 54,55
A	GB 2 303 032 A (SAMSUNG ELECTRONICS CO LTD) 5 February 1997 see abstract see page 1, line 1 - page 6, line 5 see page 7, line 26 - page 8, line 19 see figure 4	1,12, 22-24, 34-36, 41,47
A	US 5 479 447 A (CIOFFI JOHN M ET AL) 26 December 1995 see abstract see column 5, line 26 - column 6, line 19	23,24, 27,28, 32,33, 35,36, 41,45
A	EP 0 653 859 A (PLESSEY TELECOMM) 17 May 1995 see the whole document	34-46
A	GB 2 300 546 A (SAMSUNG ELECTRONICS CO LTD) 6 November 1996 see page 4, line 1 - line 11	10,11, 17,18, 54,55

INTERNATIONAL SEARCH REPORT

Information on patent family members

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